FORM PTO-1449
(REV. 7-80)U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.
MEMC 98-0410 (2489)SERIAL NO.
09/366,850

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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER							DATE	NAME	CLASS	SUBCLASS	FILING DATE IF
W.M.	1	4	3	1	4	5	9	5	02/1982	Yamamoto, et al.	148	1.5	
	2	4	3	7	6	6	5	7	03/1983	Nagasawa et al.	148	1.5	
	3	4	4	3	7	9	2	2	03/1984	Brischoff et al.	156	603	
	4	4	5	0	5	7	5	9	03/1985	O'Mara	148	1.5	
	5	4	5	4	8	6	5	4	10/1985	Tobin	148	1.5	
	6	5	3	2	7	0	0	7	07/1994	Imura et al.	257	610	
W.M.	7	5	4	0	1	6	6	9	03/1995	Falster et al.	437	12	

U.S. PATENT LIST CONTINUED ON NEXT SHEET

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
W.M.	21	0 536 958 A1	04/1993	EPO	G30B	15/00	X	
	22	DE 43 23 964 A1	01/1994	Germany	H01L	21/324		X
	23	JP7321120 (Abstract Only)	12/1995	Japan	H01L	21/322		
	24	JP7335657 (Abstract Only)	12/1995	Japan	H01L	21/322		
W.M.	25	JP8045947 (Abstract Only)	02/1996	Japan	H01L	21/322		

FOREIGN PATENT LIST CONTINUED ON NEXT SHEET

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

W.M.	30	Abe, Takao, et al., "Innovated Silicon Crystal Growth and Wafering Technologies", Electrochem. Soc. Proc., Vol. 97, No. 3 (1997) pp. 123-133.
W.M.	31	Abe, Takao, et al., "Defect-Free Surfaces of Bulk Wafers by Combination of RTA and Crystal Growth Conditions", (publication information unknown).

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W.M.	17	5	6	1	1	8	5	5	03/1997	Wijaranakula	117	2	
	18	5	6	7	4	7	5	6	10/1997	Sato et al.	437	10	
	19	5	7	3	8	9	4	2	04/1998	Kubota et al.	428	428	
H.M.	20	5	7	8	8	7	6	3	08/1998	Hayashi et al.	117	2	

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		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

W.M.	35	Temple, Victor, A.K. et al., "Optimizing Carrier Lifetime Profile for Improved Trade-off Between Turn-off Time and Forward Drop", IEEE Transactions on Electron Devices, Vol. ED-30, No. 7 (1983) pp. 782-790.
	36	Winkler, R., et al., "Improvement of the Gate Oxide Integrity by Modifying Crystal Pulling and Its Impact on Device Failures", J. Electrochem. Soc., Vol. 141, No. 5 (1994) pp. 1398-1401.
	37	Zimmermann, H., et al., "Gold and Platinum Diffusion: the Key to the Understanding of Intrinsic Point Defect Behavior in Silicon", Applied Physics A Solids and Surfaces, Vol. A55, No. 1 (1992) pp. 121-eoa
	38	Zimmermann, et al., "Investigation of the Nucleation of Oxygen Precipitates in Czochralski Silicon at an Early Stage", Appl. Phys. Lett, Vol. 60, No. 26 (1992) pp. 3250-3253
	39	Zimmermann, et al., "The Modeling of Platinum Diffusion in Silicon Under Non-equilibrium Conditions", J. Electrochem. Soc., Vol. 139, No. 1 (1992) pp. 256-262.
W.M.	40	Zimmermann, et al., "Vacancy Concentration Wafer Mapping in Silicon", Journal of Crystal Growth, Vol. 129, Nos. 3/4 (1993) pp. 582-592.

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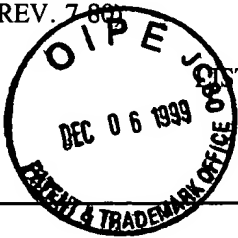
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W.M.	41	4,851,358	07/1989	Huber	437	10	
	42	4,868,133	09/1989	Huber	437	10	
	43	5,075,751	12/1991	Tomii et al.	357	38	
	44	5,939,770	08/1999	Kageyama	257	611	
W.M.	45	5,944,889	08/1999	Park et al.	117	94	

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							YES	NO
W.M.	46	0 327 316	08/1989	EPO	H01L 29	32	X	
W.M.	47	EP 0 694 960 A1	01/1996	EPO	H01L 21	322	X	
W.M.	48	JP11-150119-A	06/1999	Japan	H01L 21	322	X	

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

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*EXAMINER INITIAL		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
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W.M.	59	JP5-155700-A	06/1993	Japan	C30B	33/02	X	
W.M.	60	JP7-201874-A	08/1995	Japan	H01L	21/322	X	


OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

W.M.	61	Hawkins, et al., "Effect of Rapid Thermal Processing on Oxygen Precipitation in Silicon", Mat. Res. Soc. Symp. Proc., Vol. 104, pp. 197-200, 1988						
W.M.	62	Hawkins, et al., "The Effect of Rapid Thermal Annealing on the Precipitation of Oxygen in Silicon", J. Appl. Phys., Vol. 65, No. 9, pp. 3644-3654, 1989						

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*EXAMINER INITIAL		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
W.M.	58	JP11-067781	03/1999	Japan	H01L	21/322	X	
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)								


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*EXAMINER INITIAL		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
W.M.	55	WO 98/38675	09/1998	PCT	H01L	21/322		
W.M.	56	WO 98/45507	10/1998	PCT	C30B	15/00		
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)								
W.M.	57	Herng-Der Chiou, "The Effects of Preheatings on Axial Oxygen Precipitation Uniformity in Czochralski Silicon Crystals", J. Electrochem. Soc., Vol. 139, No. 6, June, 1992						

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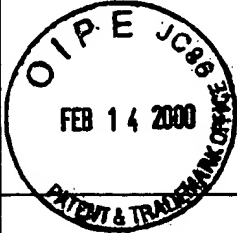
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						YES	NO	

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)		
W.M.	52	Falster, R., et al., "The Engineering of Silicon Wafer Material Properties Through Vacancy Concentration Profile Control and the Achievement of Ideal Oxygen Precipitation Behavior", Mat. Res. Soc. Symp. Proc., Vol. 510, pp. 27-35, 1998.
W.M.	53	Jacob, M., et al., "Influence of RTP on Vacancy Concentrations", Mat. Res. Soc. Symp. Proc. Vol. 490, pp. 129-134, 1998.
W.M.	54	Pagani, M., et al., "Spatial variations in oxygen precipitation in silicon after high temperature rapid thermal annealing", Appl. Phys. Lett., Vol. 70, No. 12, pp. 1572-1574, 1997.

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W.M.	49	3-9078	02/1991	Japan	C30B	29/06	X	
W.M.	50	0 503 816	09/1996	EPO	C30B	33/02		
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)								
	51	Nadahara, et al., "Hydrogen Annealed Silicon Wafer", Solid State Phenomena, Vols. 57-58, pp. 19-26 (1997).						

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